Appendix I

ARCHITECTURE AND CONSTRUCTION YOUTH APPRENTICESHIP

COURSE OUTCOME SUMMARY: OVERVIEW AND TABLE OF CONTENTS

Architecture & Construction Youth Apprenticeship
Course Outcome Summary

Course Information

Organization	Center for Career Development & Employability Training (CCDET)- University of Wisconsin- Oshkosh
Developers	Robin Kroyer-Kubicek
Development Date	July 2011

Description

This curriculum describes the performance-based worksite Competencies, Performance Standards, and Learning Objectives for the Wisconsin Youth Apprenticeship (YA) Program in Architecture and Construction. The Wisconsin Architecture and Construction YA Program is designed to provide students with a working understanding of core industry skills and occupationally specific technical skills that serve as the standard for occupations in the Architecture and Construction industry. This program provides the framework for educators and industry to work together to produce work-ready, entry-level employees that will compete favorably in a global market, as well as, provide for post-secondary educational advancement while integrating work-based learning in the school and worksite.

The Architecture and Construction YA program competencies are aligned with the national States' Career Cluster Skill Standards maintained by the States' Career Clusters project (http://www.careerclusters.org/), as well as applicable skills in the Project Lead the Way (http://www.pltw.org/) Curriculum and STEM Academy (http://www.stem101.org/index.asp) Curriculum. Architecture and Construction YA students are required to perform all of the Core and Safety skills for the pathway they enroll in. **Level One (one year)** YA students are to choose additional competencies from the REQUIRED Architecture and Construction Unit in the specific pathway. **Level Two (two year)** YA students are to complete all of the Level One requirements plus an additional unit within their chosen pathway.

Pathway choices:

- Design/Pre-Construction

EACH competency (work site skill) is listed with its corresponding Performance Standards and Learning Objectives. The Performance Standards describe the behaviors, ***as applicable***, that employers should look for in order to evaluate the competency. The Learning Objectives describe the classroom learning content for the required related technical instruction.

Curriculum Sources

- California State Board of Education. California High School K12 Standards for Career Technical Education dated May 2005.
- Illinois Occupational Skill Standards for Architecture Drafting & Design, Illinois Occupational Skill Standards and Credentialing Council, accessed September 2010 online at http://www.ioes.org/ctecurriculum-skillstandards.cfm.
- Mid-continent Research for Education and Learning standards for Engineering Education. http://www.mcrel.org/compendium/SubjectTopics.asp?SubjectID=28. Accessed September 2010.
- Milwaukee Area Technical College, Course Outcome Summary proposed revisions for Mechanical & Environmental Systems I (10/20/10), Mechanical & Environmental Systems II (10/20/10), and Structural Systems & Components (10/20/10).
- Oklahoma Career Tech Skills Standards for Drafting: Architectural Drafter (OD42702) dated 2007, and for Drafting Technician (OD42701) dated 2007.
- Project Lead the Way Curriculum Outline of Learning Objectives, http://www.pltw.org. Curriculum obtained with permission from Ken Maguire, September 2010.
- States' Careers Clusters, Architecture & Construction Career Cluster Knowledge and Skills charts for Cluster Skills, Design/Pre-Construction, and Construction. http://www.careerclusters.org/, accessed September 2010.
- STEM Academy Curriculum Outline of Learning Objectives, http://www.stem101.org/index.asp. Curriculum obtained with permission from Dr. Alan Gomez, September 2010.
- U.S. Department of Labor, Residential Construction Industry Competency Model. http://www.careeronestop.org/CompetencyModel/pyramid.aspx?CONR=Y. Accessed September 1, 2010.
- Wikipedia, various Architectural Drafting Processes, www.wikipedi.org, accessed October 2010-March 2011.
- Wisconsin Administrative Code, Department of Workforce Development, Chapter 270, Child Labor, (dated August 2005) and Wisconsin State Statutes Chapter 106, Apprentice, Employment and Equal Rights Program..
- Wisconsin Department of Workforce Development, Jim Chiolino, Labor Standards Bureau, Child Labor Laws, 2011.
- Wisconsin Department of Workforce Development, Architecture YA Advisory Review Committee, formed September 2010 for the purpose of revising and updating the Drafting & Design- Architectural Design Youth Apprenticeship curriculum.
- Wisconsin Department of Workforce Development, Drafting & Design- Architectural Design Youth Apprenticeship DACUM dated April, 28, 1994.
- Worknet Occupation Task Lists for Architectural Drafters and Architects (except landscape or naval), accessed August 2010 from http://worknet.wisconsin.gov/worknet/default.aspx.

This curriculum was developed through a Grant from the Wisconsin Department of Workforce Development to the University of Wisconsin-Oshkosh's Center for Career Development and Employability Training (CCDET).

Architecture & Construction Youth Apprenticeship

Table of Contents

REQUIRED SKILLS

APPENDIX L:

Unit 4: Design/Pre-Construction Pathway: Architectural Planning

1. Draw a site plan
2. Draw sectional & elevation views
3. Draw a floor plan
4. Develop a stair section drawing
5. Draw a floor system & foundation plan
6. Draw a framing plan
7. Draw a roof framing plan
8. Develop sustainable/conservation elements into a design
9. Review completed architectural plans and documents
10. Revise drawings
11. Construct a Bill of Materials
12. Assist to develop architectural detail schedules
13. Assist to coordinate architectural project activities